

ABSTRACT OF THE DISCLOSURE

A line interface couples signals between a data transceiver and a transmission line having a load impedance Z . The line interface includes a transformer, a driver circuit for supplying a transmit signal from the data transceiver to the transformer, and a receiver circuit for receiving a receive signal from the transformer. The transformer includes a first port coupled to the transmission line, a second port coupled to the driver circuit, a third port coupled to the receiver circuit, a first winding part having a turns ratio of $1:n$, where $n > 1$, for coupling the transmit signal from the second port to the first port, and a second winding part having a turns ratio of $1:m$, where $m < n$, for coupling the receive signal from the first port to the third port.